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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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Complete if Known

Application Number	10/643,586
Filing Date	August 18, 2003
First Named Inventor	Faanes, Gregory
Group Art Unit	2183
Examiner Name	Fennema, Robert

Sheet 1 of 1

Attorney Docket No: 1376.699US1

**US PATENT DOCUMENTS**

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Filing Date if Appropriate
RF	US-5,721,921	02/24/1998	Kessler, R. E., et al.	05/25/1995
RF	US-5,765,009	06/09/1998	Ishizaka, K.	01/08/1997
RF	US-6,308,316	10/23/2001	Hashimoto, S., et al.	01/08/1998

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	T <sup>2</sup>
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**OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS**

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RF		"Msync - Synchronise Memory with Physical Storage", <u>The Single UNIX @ Specification, Version 2: Msync, The Open Group.</u> <a href="http://www.opengroup.org/onlinepubs/007908799/xsh/msync.html">http://www.opengroup.org/onlinepubs/007908799/xsh/msync.html</a> , (1997), 3 pgs.	
RF		COHOON, J., et al., <u>C++ Program Design</u> , McGraw-Hill Companies, Inc., 2nd Edition, (1999), 493	
RF		PATTERSON, DAVID A., et al., <u>Computer Architecture: A Quantitative Approach</u> , 2nd Edition, Morgan Kaufmann Publishers, Inc., San Francisco, CA, (1996), 699-708	
RF		PATTERSON, D. A., et al., <u>Computer Architecture: A Quantitative Approach</u> , 2nd Edition, Morgan Kaufmann Publishers, Inc., (1996), 194-197	

EXAMINER /Robert Fennema/

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**US PATENT DOCUMENTS**

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RF	US-2002/0169938A1	11/14/2002	Scott, S. L., et al.	12/14/2001
	US-2002/0172199A1	11/21/2002	Scott, S. L., et al.	12/14/2001
	US-2003/0005380A1	01/02/2003	Nguyen, H. T., et al.	06/29/2001
	US-4,771,391	09/13/1988	Blasbalg, H.	07/21/1986
	US-4,868,818	09/19/1989	Madan, H. S., et al.	10/29/1987
	US-4,888,679	12/19/1989	Fossum, T., et al.	01/11/1988
	US-4,933,933	06/12/1990	Dally, W. J., et al.	12/19/1986
	US-5,008,882	04/16/1991	Peterson, J. C., et al.	08/17/1987
	US-5,031,211	07/09/1991	Nagai, Y., et al.	02/01/1990
	US-5,036,459	07/30/1991	Den Haan, P. A., et al.	03/09/1989
	US-5,068,851	11/26/1991	Bruckert, W., et al.	08/01/1989
	US-5,105,424	04/14/1992	Flaig, C. M., et al.	06/02/1988
	US-5,157,692	10/20/1992	Horie, T., et al.	03/20/1990
	US-5,161,156	11/03/1992	Baum, R. I., et al.	02/02/1990
	US-5,170,482	12/08/1992	Shu, R., et al.	02/13/1991
	US-5,175,733	12/29/1992	Nugent, S. F.	12/27/1990
	US-5,197,130	03/23/1993	Chen, S. S., et al.	12/29/1989
	US-5,218,601	06/08/1993	Chujo, T., et al.	12/20/1990
	US-5,218,676	06/08/1993	Ben-ayed, M., et al.	01/08/1990
	US-5,239,545	08/24/1993	Buchholz, D. R.	11/05/1990
	US-5,276,899	01/04/1994	Neches, P. M.	08/10/1990
	US-5,280,474	01/18/1994	Nickolls, J. R., et al.	01/05/1990
	US-5,313,628	05/17/1994	Mendelsohn, N. R., et al.	12/30/1991
	US-5,313,645	05/17/1994	Rolfe, D. B.	05/13/1991
	US-5,331,631	07/19/1994	Teraslinna, K. T.	03/16/1993
	US-5,333,279	07/26/1994	Dunning, D.	06/01/1992
	US-5,341,504	08/23/1994	Mori, K., et al.	03/01/1990
	US-5,347,450	09/13/1994	Nugent, S. F.	08/19/1993
	US-5,353,283	10/04/1994	Tsuchiya, P. F.	05/28/1993
	US-5,365,228	11/15/1994	Childs, P. L., et al.	08/21/1991
	US-5,418,916	05/23/1995	Hall, B. A., et al.	10/04/1990
	US-5,430,850	07/04/1995	Papadopoulos, G. M., et al.	07/22/1991
	US-5,434,995	07/18/1995	Oberlin, S. M., et al.	12/10/1993
	US-5,440,547	08/08/1995	Easki, H., et al.	01/05/1994
	US-5,446,915	08/29/1995	Pierce, P. R.	05/25/1993
	US-5,517,497	05/14/1996	LeBoudec, J.-Y., et al.	03/21/1995
	US-5,546,549	08/13/1996	Barrett, L., et al.	06/01/1994
	US-5,548,639	08/20/1996	Ogura, T., et al.	10/22/1992
	US-5,550,589	08/27/1996	Shiojiri, H., et al.	11/04/1994
	US-5,555,542	09/10/1996	Ogura, T., et al.	01/11/1996

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Attorney Docket No: 1376.699US1

### US PATENT DOCUMENTS

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Filing Date If Appropriate
RF	US-5,560,029	09/24/1996	Papadopoulos, G. M., et al.	05/31/1994
	US-5,640,524	06/17/1997	Beard, D. R., et al.	02/28/1995
	US-5,649,141	07/15/1997	Yamazaki, T.	06/30/1995
	US-5,860,146	01/12/1999	Vishin, S., et al.	06/25/1996
	US-5,897,664	04/27/1999	Nesheim, W. A., et al.	07/01/1996
	US-6,003,123	12/14/1999	Carter, N. P., et al.	02/10/1998
	US-6,088,701	07/11/2000	Whaley, K. M., et al.	11/14/1997
	US-6,101,590	08/08/2000	Hansen, C.	10/10/1995
	US-6,105,113	08/15/2000	Schimmel, C. F.	08/21/1997
	US-6,490,671	12/03/2002	Frank, R. L., et al.	05/28/1999
	US-6,684,305	01/27/2004	Deneau, T. M.	04/24/2001
	US-6,782,468	08/24/2004	Nakazato, S.	12/13/1999
	US-6,816,960	11/09/2004	Koyanagi, H.	07/10/2001
	US-6,922,766	07/26/2005	Scott, S. L.	09/04/2002
	US-6,925,547	08/02/2005	Scott, S. L., et al.	12/14/2001
	US-6,976,155	12/13/2005	Drysdale, T. G., et al.	06/12/2001

### FOREIGN PATENT DOCUMENTS

Examiner Initials *	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	T <sup>2</sup>
RF	EP-0353819A2	02/07/1990	Gupta, R., et al.	
	EP-0473452A2	03/04/1992	Duerschmid, O., et al.	
	EP-0475282A2	09/14/1990	Kametani, M.	
	EP-0501524A2	09/02/1992	Hillis, D. W., et al.	
	EP-0570729A2	11/24/1993	Collins, C. A., et al.	
	WO-87/01750A1	03/26/1987	Anderson, S.	
	WO-88/08652A1	11/03/1988	Hillis, D. W., et al.	
	WO-95/16236A1	06/15/1995	Oberlin, S. M., et al.	
	WO-96/10283A1	04/04/1996	Bonner, J.	
	WO-96/32681A1	10/17/1996	Thorson, G. M., et al.	

### OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

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RF		"Cray Assembly Language (CAL) for Cray X1™ Systems Reference Manual", Section 2.6, Memory Ordering, <a href="http://docs.cray.com/books/S-2314-51/index.html">http://docs.cray.com/books/S-2314-51/index.html</a> , (June, 2003), 302 pgs.	
RF		"Deadlock-Free Routing Schemes on Multistage Interconnection Networks", IBM Technical Disclosure Bulletin, 35, (December, 1992), 232-233	

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Group Art Unit	2183
Examiner Name	Unknown

Sheet 3 of 5

Attorney Docket No: 1376.699US1

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Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
RF		"ECPE 4504: Computer Organization Lecture 12: Computer Arithmetic", The Bradley Department of Electrical Engineering, (October 17, 2000), 12 pgs.	
		ADVE, V. S., et al., "Performance Analysis of Mesh Interconnection Networks with Deterministic Routing", <u>IEEE Transactions on Parallel and Distributed Systems</u> , (March, 1994), 225-246	
		BOLDING, KEVIN, "Non-Uniformities Introduced by Virtual Channel Deadlock Prevention", <u>Technical Report 92-07-07</u> , Department of Computer Science and Engineering, FR-35 University of Washington; Seattle, WA 98195, (July 21, 1992), 6 pgs.	
		BOLLA, R., "A Neural Strategy for Optimal Multiplexing of Circuit and Packet-Switched Traffic", <u>Proceedings, IEEE Global Telecommunications Conference</u> , (1992), 1324-1330	
		BOURA, Y. M., et al., "Efficient Fully Adaptive Wormhole Routing in n-Dimensional Meshes", <u>Proceedings, International Conference on Distributed Computing Systems</u> , (June, 1994), 589-596	
		BUNDY, A., et al., "Turning Eureka Steps into Calculations in Automatic Program", <u>Proceedings of UK IT 90</u> , (IEE Conf. Pub. 316) (DAI Research Paper 448), (1991), 221-226	
		CARLILE, BRADLEY R., "Algorithms and Design: The CRAY APP Shared-Memory System", <u>COMPCON Spring '93. Digest of Papers.</u> , (February 22, 1993), 312-320	
		CHEN, Y., et al., "UTLB: A Mechanism for Address Translation on Network Interfaces", <u>Proceedings of the Eighth International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS)</u> , (1998), 193-204	
		CHIEN, A. A., et al., "Planar-Adaptive Routing: Low-Cost Adaptive Networks for Multiprocessors", <u>Proceedings, 19th International Symposium on Computer Architecture</u> , (May, 1992), 268-277	
		DALLY, W. J., et al., "Deadlock-Free Adaptive Routing in Multicomputer Networks Using Virtual Channels", <u>IEEE Transactions on Parallel and Distributed Systems</u> , 4(4), (April, 1993), 466-475	
		DALLY, WILLIAM, et al., "Deadlock-Free Message Routing in Multiprocessor Interconnection Networks", <u>IEEE Transactions on Computers</u> , Vol. C-36, (May 1987), 547-553	
		DALLY, WILLIAM, "Performance Analysis of k-ary n-cube Interconnection Networks", <u>IEEE Transactions on Computers</u> , 39(6), (June, 1990), 775-785	
		DALLY, W. J., "Virtual Channel Flow Control", <u>Proceedings, 17th International Symposium on Computer Architecture</u> , (May, 1990), 60-80	
↓		DUATO, J., "A New Theory of Deadlock-Free Adaptive Routing in Wormhole Networks", <u>IEEE Transactions on Parallel and Distributed Systems</u> , 4(12), (December, 1993), 1320-1331	

EXAMINER

DATE CONSIDERED

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RF		ERNST, D., et al., "Cyclone: A Broadcast-Free Dynamic Instruction Scheduler with Selective Replay", <u>30th Annual International Symposium on Computer Architecture (ISCA-2003)</u> , (June, 2003), 10 pgs.	
		GALLAGER, ROBERT, "Scale Factors for Distributed Routing Algorithm", <u>NTC '77 Conference Record, Vol. 2</u> , (1977), 28:2-1 - 28:2-5	
		GLASS, C. J., et al., "The Turn Model for Adaptive Routing", <u>Proceedings, 19th International Symposium on Computer Architecture</u> , (May, 1992), 278-287	
		GRAVANO, L., et al., "Adaptive Deadlock- and Livelock-Free Routing With all Minimal Paths in Torus Networks", <u>IEEE Transactions on Parallel and Distributed Systems</u> , 5(12), (December, 1994), 1233-1251	
		GUPTA, RAJIV, et al., "High Speed Synchronization of Processors Using Fuzzy Barriers", <u>International Journal of Parallel Programming</u> 19(1), (February, 1990), 53-73	
		ISHIHATA, HIROAKI, et al., "Architecture of Highly Parallel AP1000 Computer", <u>Systems and Computers in Japan</u> , 24(7), (1993), 69-76	
		JESSHOPE, C. R., et al., "High Performance Communications in Processor Networks", <u>Proceedings, 16th International Symposium on Computer Architecture</u> , (May 1989), 150-157	
		KIRKPATRICK, S., et al., "Optimization by Simulated Annealing", <u>Science</u> , 220(4598), (May 13, 1983), 671-680	
		KONTOTHANASSIS, L., et al., "VM-Based Shared Memory on Low-Latency, Remote-Memory-Access Networks", <u>Proceedings of the ACM ISCA '97</u> , (1997), 157-169	
		LINDER, DANIEL H., et al., "An Adaptive and Fault Tolerant Wormhole Routing Strategy for k-ary n-cubes", <u>IEEE Transactions on Computers</u> , 40(1), (1991), 2-12	
		LUI, Z, et al., "Grouping Virtual Channels for Deadlock-Free Adaptive Wormhole Routing", <u>Fifth International Conference, Parallel Architectures and Languages Europe, (PARLE '93)</u> , (June 14-17, 1993), 254-265	
		NUTH, PETER, et al., "The J-Machine Network", <u>Proceedings of the IEEE International Conference on Computer Design on VLSI in Computer &amp; Processors</u> , (1992), 420-423	
		O'KEEFE, MATTHEW T., et al., "Static Barrier MIMD: Architecture and Performance Analysis", <u>Journal of Parallel and Distributed Computing</u> , 25(2), (March 25, 1995), 126-132	
		SCOTT, S., "Synchronization and Communication in the T3E Multiprocessor", <u>ASPLOS, Volume II</u> , (1996), 26-36	
		SHUMWAY, M., "Deadlock-Free Packet Networks", <u>Transputer Research and Applications 2, NATUG-2 Proceedings of the Second Conference of the North American Transputer Users Group</u> , (October 18-19, 1989), 140-177	

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RF		SNYDER, L., "Introduction to the Configurable, Highly Parallel Computer", <u>IEEE Computer</u> 15(1), (January, 1982), 47--56	
		TALIA, D., "Message-Routing Systems for Transputer-Based Multicomputers", <u>IEEE Micro</u> , 13(3), (June, 1993), 62-72	
		WANG, WEILIN, et al., "Trunk Congestion Control in Heterogeneous Circuit Switched Networks", <u>IEEE Transactions on Communications</u> , 40(7), (July, 1992), 1156-1161	
		WOOD, D. A., et al., "An In-Cache Address Translation Mechanism", <u>Proceedings of the 13th Annual International Symposium on Computer Architecture</u> , (1986), 358-365	
		WU, MIN-YOU, et al., "DO and FORALL: Temporal and Spatial Control Structures", <u>Proceedings, Third Workshop on Compilers for Parallel Computers, ACPC/TR</u> , (July, 1992), 258-269	
		YANG, C. S., et al., "Performance Evaluation of Multicast Wormhole Routing in 2D-Torus Multicomputers", <u>Proceedings, Fourth International Conference on Computing and Information (ICCI '92)</u> , (1992), 173-178	
		YANTCHEV, J., et al., "Adaptive, Low Latency, Deadlock-Free Packet Routing for Networks of Processors", <u>IEEE Proceedings</u> , 136, Part E, No. 3, (May, 1989), 178-186	

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